

Parcel C Petroleum Program Field Activities Hunters Point Naval Shipyard San Francisco, California

BRAC Cleanup Team Meeting

July 2, 2014

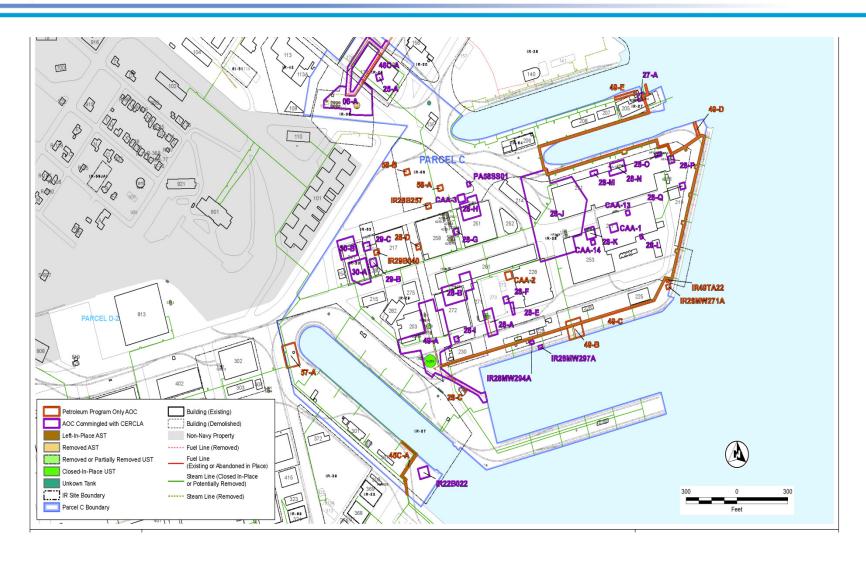
Presentation Outline



- Overview of Parcel C Petroleum Sites
- TPH Field Work Completed to Date
- Overview of Upcoming TPH Field Work
- Q&A

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Parcel C AOC Locations



Overview of Parcel C TPH Sites



- A total of 46 petroleum-related sites currently require closure
- 21 Site Closeout Reports (SCRs) to be submitted based on historic data
 - 11 of 21 draft SCRs submitted to date.
 - Water Board has tentatively approved four sites (AOC 28-D, AOC 28-F, AOC 29-B, and AOC 58-B) for No Further Action (NFA).
 - Water Board has requested additional information for two SCRs (CAA-2 and AOC 58-A). Navy in process of revising SCRs.
 - Navy to resubmit three SCRs (AOC 49-D, AOC 49-E, and BOC IR28B257)
 based on revised closure approach.
 - Two SCRs currently under Water Board review (AOC 28-I and AOC 28-Q).



Parcel C Petroleum Hydrocarbon Sites Overview

| SITE ID | Site Status | SITE ID | Site Status |
|----------|---|----------|---|
| CAA-1 | TPH Investigation Planned (Gilbane) | AOC 28-E | Draft SCR Pending |
| CAA-2 | Waterboard Review Complete; Additional Info Requested | AOC 28-F | NFA Approved Pending Final SCR |
| CAA-3 | Draft SCR Pending | AOC 28-G | Draft SCR Pending |
| CAA-13 | TPH Investigation Planned (Gilbane) | AOC 28-H | CERCLA Excavation Ongoing (AC); Further TPH Investigation Planned |
| CAA-14 | CERCLA Remediation Ongoing (CB&I); Further TPH Investigation Planned | AOC 28-I | SCR Under Water Board Review |
| AOC 06-A | CERLCA Remediation Ongoing (CB&I); Further TPH Investigation Planned | AOC 28-J | CERCLA Excavation and Sampling Complete (CB&I); Data Under Evaluation |
| AOC 25-A | CERCLA Remediation Ongoing (CB&I); Future Data Evaluation Required | AOC 28-K | CERCLA Remediation Ongoing (CB&I); Further TPH Investigation Planned |
| AOC 27-A | TPH Investigation Planned (Gilbane) | AOC 28-L | Removed from Closure List |
| AOC 28-A | CERCLA Excavation Complete (CB&I); No Further Action Planned | AOC 28-M | Draft SCR Pending |
| AOC 28-B | CERCLA Excavation Complete (CB&I); No Further Action Planned | AOC 28-N | Draft SCR Pending |
| AOC 28-C | TPH Investigation Planned (Gilbane) | AOC 28-O | TPH Investigation Planned (Gilbane) |
| AOC 28-D | NFA Approved Pending Final SCR | AOC 28-P | CERCLA Excavation Complete (CB&I); No Further Action Planned |



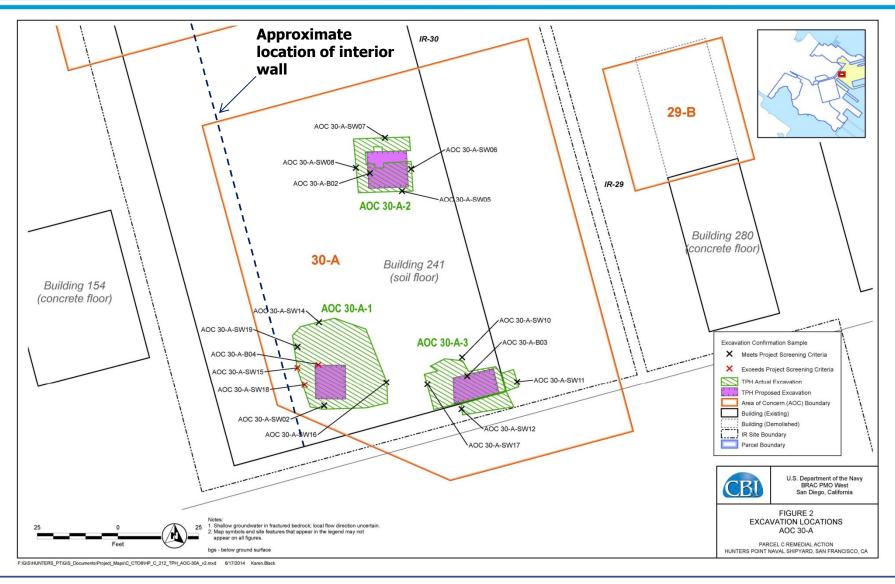
Parcel C Petroleum Hydrocarbon Sites Overview

| SITE ID | Site Status | SITE ID | Site Status |
|-----------|---|-------------------|---|
| AOC 28-Q | SCR Under Water Board Review | AOC 57-A | TPH Investigation Planned (Gilbane) |
| AOC 29-B | NFA Approved Pending Final SCR | AOC 58-A | Waterboard Review Complete; Additional Info Requested |
| AOC 29-C | CERCLA Excavation Complete (CB&I); No Further Action Planned | AOC 58-B | NFA Approved Pending Final SCR |
| AOC 30-A | TPH Excavation Complete (CB&I); Further TPH Investigation Planned | BOC IR22B022 | CERCLA Excavation and TPH Sampling Complete (CB&I); No Further Action Planned |
| AOC 30-B | CERCLA Excavation Complete (CB&I); TPH Data Under Evaluation | BOC IR28B257 | Navy to Resubmit SCR |
| AOC 45C-A | TPH Investigation Planned (Gilbane) | BOC IR28MW271A | Draft SCR Pending |
| AOC 46C-A | CERCLA Remediation Ongoing (CB&I); Future Data Evaluation Required | BOC IR28MW294A | Draft SCR Pending |
| AOC 49-A | CERCLA Excavation and TPH Sampling Complete (CB&I); TPH Data Under Evaluation | BOC IR28MW297A | Draft SCR Pending |
| AOC 49-B | TPH Investigation Planned (Gilbane) | BOC IR29B040 | Draft SCR Pending |
| AOC 49-C | Draft SCR Pending | BOC IR49TA22 | TPH Investigation Planned (Gilbane) |
| AOC 49-D | Navy to Resubmit SCR | BOC PA58SS01 | TPH Investigation Planned (Gilbane) |
| AOC 49-E | Navy to Resubmit SCR | | |



- Excavation AOC 30-A composed of 3 small excavations:
 - AOC 30-A-1
 - AOC 30-A-2
 - AOC 30-A-3
- Excavated AOC 30-A in January 2014, step out excavations performed in January 2014 and May 2014
- Step out excavations performed to 10 feet bgs and laterally to extent practicable given the building structure and concrete block obstruction
- Approximately 290 cy excavated
- Twenty-seven (27) sidewall and bottom confirmation samples collected
- Samples analyzed for TPH and PAHs
- Backfilled in June 2014

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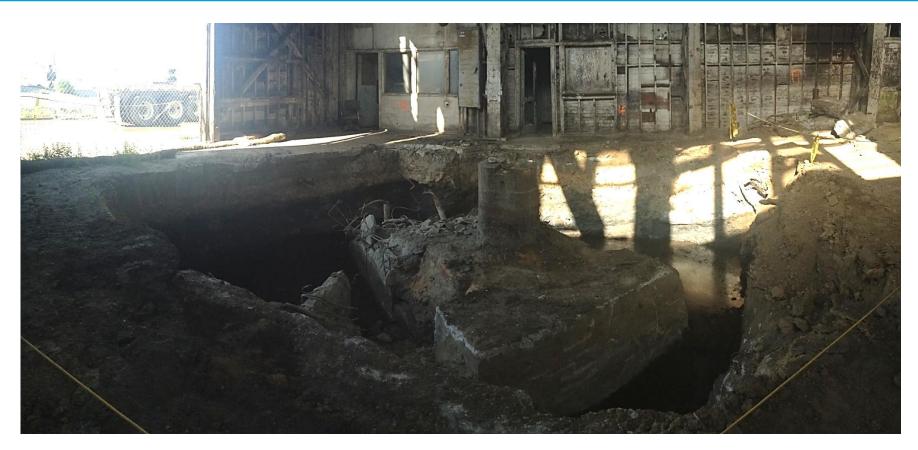




Confirmation soil samples met Project Screening Criteria with the exception of the following:

| Sample ID | Exceedance | Action |
|-------------------------------|---|--|
| AOC 30-A-B04 (10 feet bgs) | Benzo(a)pyrene: 0.11 mg/kg (<i>Screening Criterion: 0.038 mg/kg</i>) Naphthalene: 5.5 mg/kg (<i>Screening Criterion: 1.3 mg/kg</i>) | No further action, sample is > 10 feet bgs |
| AOC 30-A-SW15 (6 feet bgs) | Naphthalene: 2.7 mg/kg (Screening Criterion: 1.3 mg/kg) | Additional sampling planned |
| AOC 30-A-SW18 (6 feet bgs) | Benzo(a)anthracene: 1.5 mg/kg (<i>Screening Criterion: 0.38 mg/kg</i>) Benzo(a)pyrene: 1.5 mg/kg (<i>Screening Criterion: 0.038 mg/kg</i>) Benzo(b)fluoranthene: 1.1 mg/kg (<i>Screening Criterion: 0.38 mg/kg</i>) Benzo(k)fluoranthene: 1.1 mg/kg (<i>Screening Criterion: 0.38 mg/kg</i>) Dibenz(a,h)anthracene: 0.29 mg/kg (<i>Screening Criterion: 0.062 mg/kg</i>) Indeno(1,2,3-c,d)pyrene: 0.81 mg/kg (<i>Screening Criterion: 0.62 mg/kg</i>) | Additional sampling planned |





AOC 30-A-1 Over-Excavated, Facing Southwest





AOC 30-A-2 Excavated, Facing East



AOC 30-A-3 Over-Excavated, Facing West





AOC 30-A-1 Backfilled, Facing West



AOC 30-A-2 Backfilled, Facing Northwest



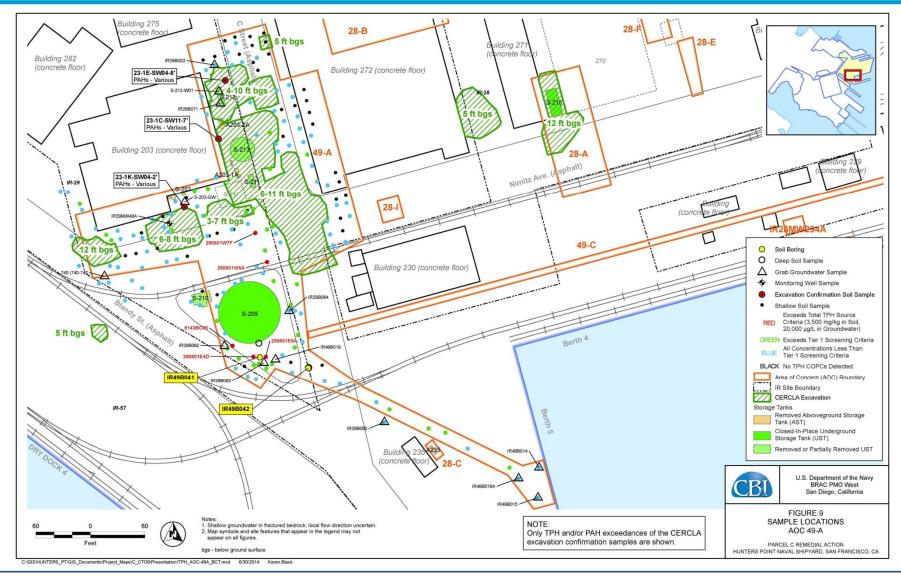
AOC 30-A-3 Backfilled, Facing Southeast



- Commingled CERCLA excavation 23-1 previously completed
- Advanced two borings to 10 feet bgs
- Collected two soil samples and one groundwater sample per location
- Analyzed samples for TPH, BTEX, MTBE, and PAHs
- Well IR29MW56F not sampled because it was abandoned
- Soil and groundwater samples below Project Screening Criteria with the exception of the following:

| Sample Location | Exceedance | |
|-----------------|------------------------------------|--|
| IR49B041 | Benzo(a)pyrene: 0.093 mg/kg | |
| (5.5 feet bgs) | (Screening Criterion: 0.038 mg/kg) | |

 Data is under evaluation wrt to the HPNS Petroleum Strategy



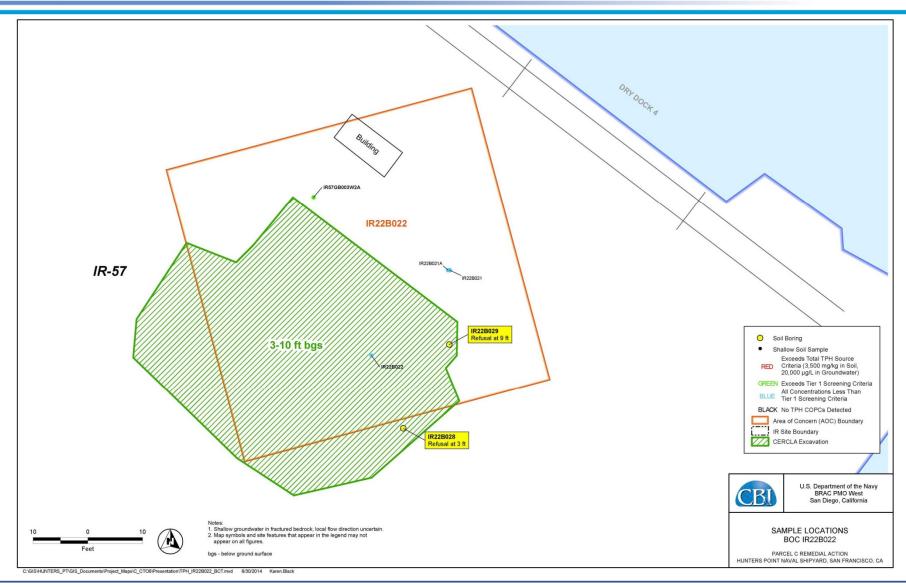


TPH Field Work Completed: BOC IR22B022

- Advanced two borings to 3 and 9 feet bgs
- At location IR22B028, hit refusal at 3 feet bgs, reattempted with HSA drill rig, hit refusal again
- Collected three soil samples and one groundwater sample
- Analyzed samples for TPH
- All soil and groundwater samples below Project Screening Criteria
- No further investigation activities planned. SCR to be prepared.

TPH Field Work Completed: BOC IR22B022





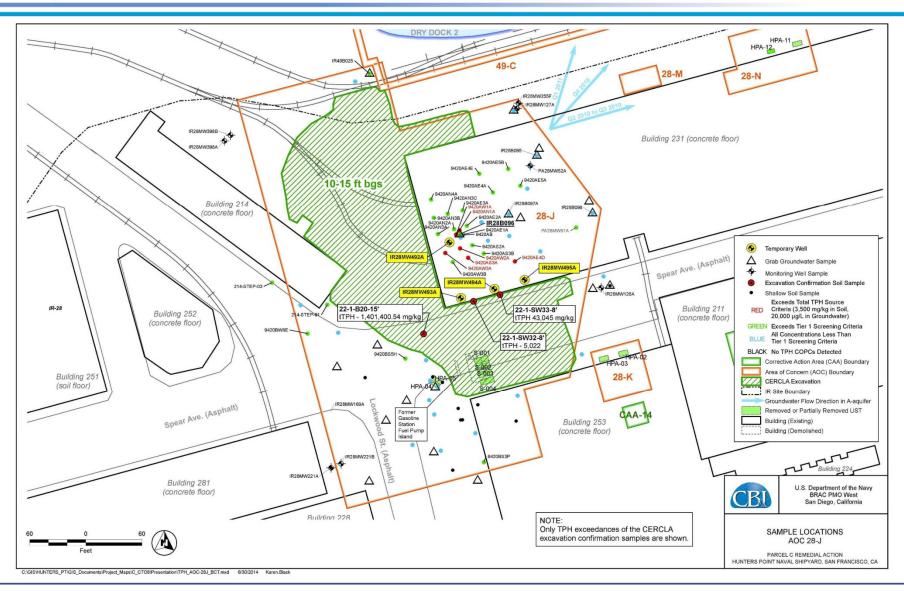


- Commingled CERCLA excavation 22-1 previously completed
- Advanced four borings to 15 feet bgs, converted borings to temporary wells
- Collected 3 soil samples and 1 groundwater sample per location
- Analyzed samples for TPH, BTEX, and MTBE
- Soil and groundwater samples below Project Screening Criteria with the exception of the following:

| Sample Location | Exceedance |
|-------------------------------------|---|
| IR28MW492A (soil) (7.5 feet bgs) | TPH as motor oil: 2,600 mg/kg (Screening Criterion: 1,850 mg/kg) |
| IR28MW494A (soil) (6.0 feet bgs) | TPH as motor oil: 4,000 mg/kg (Screening Criterion: 1,850 mg/kg) |
| IR28MW495A (soil) (9.0 feet bgs) | TPH as diesel: 14,000 mg/kg (Screening Criterion: 1,500 mg/kg) TPH as motor oil: 18,000 mg/kg (Screening Criterion: 1,850 mg/kg) |
| IR28MW495A (groundwater) | TPH as diesel: 13,000 ug/L (<i>Screening Criterion: 1,400 ug/mL</i>) TPH as motor oil: 5,700 ug/L (<i>Screening Criterion: 1,850 ug/mL</i>) |

Data is under evaluation wrt to the HPNS Petroleum Strategy

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Upcoming TPH Field Work – July & Aug. 2014

| SITE ID | LOCATION | Soil | Groundwater | Monitoring Wells |
|-----------------|------------------------|--|---|------------------|
| CAA-1 | Inside Building 211 | 3 soil borings to 10 ft bgs; 2 soil samples per boring | 1 grab GW sample | - |
| CAA-13 | Inside Building 211 | 4 soil borings to 10 ft bgs; 2 soil samples per boring | 4 grab GW samples | - |
| AOC 27-A | Near Building 205 | 2 soil borings to 22 ft bgs; 2 soil samples per boring | 2 groundwater monitoring well samples | Install 2 MWs |
| AOC 28-C | Adj. to Building 235 | 2 soil borings to 10 ft bgs; 2 soil samples per boring | 2 grab GW samples | - |
| AOC 28-O | Near Building 231 | 3 soil borings to 10 ft bgs; 2 soil samples per boring | 3 grab GW samples | - |
| AOC 45C-A | S of Dry Dock 4 | 3 soil borings to 10 ft bgs; 2 soil samples per boring | 3 grab GW samples | - |
| AOC 49-B | S of Nimitz, Berth 3 | 2 soil borings to 10 ft bgs; 2 soil samples per boring | 2 grab GW samples | - |
| AOC 57-A | W of Dry Dock 4 | 3 soil borings to 10 ft bgs; 2 soil samples per boring | 3 grab GW samples | - |
| BOC IR49TA22 | Berth 2, Bay margin | 3 soil borings to 10 ft bgs; 2 soil samples per boring | 1 grab GW sample | - |
| BOC PA58SS01 | Van Keuren/Lockwood | 1 soil boring to 10 ft bgs; 2 soil samples | 1 grab GW sample | - |



Upcoming TPH Field Work – Nov. 2014

| SITE ID | LOCATION | Soil | Groundwater | Monitoring Wells |
|----------|----------------------|--|---|------------------|
| CAA-14 | Inside Building 253 | 3 soil borings to 10 ft bgs; 2 soil samples per boring | 1 grab GW sample | - |
| AOC 28-K | Inside Building 253 | 3 soil borings to 15 ft bgs; 4 soil samples per boring | 6 groundwater monitoring well samples | Install 1 MW |
| AOC 06-A | Adj. to Building 134 | 5 soil borings to various depths; 9 total soil samples | TBD GW samples | Install 4 MWs |
| AOC 28-H | Inside Building 251 | 2 soil samples from MW boring | 2 groundwater monitoring well samples | Install 2 MWs |

 Additional investigations at AOC 25-A and AOC 46 C-A may be warranted based on review of current data set and post-remediation data.



Parcel C Petroleum Program Field Activities

Questions/Answers